

Amendments to the Claims

1. - 56. (Canceled)

57. (Previously presented) A combined information display and information input device comprising a matrix of independently addressable light emitting devices and a plurality of light sensing devices, said light emitting devices comprising organic light emitting diodes comprising organic light emitting material positioned between a low work function electrode formed from a low work function material layer and a high work function electrode formed from a high work function material layer, and said light sensing devices comprising organic photovoltaic devices comprising at least an organic electron donor and at least an organic electron acceptor positioned between a high work function electrode formed from a high work function material layer and a low work function electrode formed from a low work function material layer, wherein the light emitting devices and the light sensing devices are disposed on a common substrate, and the high work function electrode of both the light emitting devices and the light sensing devices is formed from the same high work function layer and/or the low work function electrode of both the light emitting devices and the light sensing devices is formed from the same low work function layer.

58. (Previously presented) The device of claim 57 wherein at least one of said organic electron donor and said organic electron acceptor comprises a semiconductive organic polymer.

59. (Previously presented) The device of claim 57 wherein at least one of said organic electron donor and said organic electron acceptor comprises a fullerene.

60. (Previously presented) The device of claim 57 wherein said organic electron donor and said organic electron acceptor comprise semiconductive organic polymers.

61. (Previously presented) The device of claim 57 wherein said organic electron donor and said organic electron acceptor comprise a blend of semiconductive organic electron donor polymer and semiconductive organic electron acceptor polymer.

62. (Previously presented) The device of claim 57 wherein at least one of said organic photovoltaic devices is sensitive to light in a non-visible region of the electromagnetic spectrum.

63. (Previously presented) The device of claim 57 wherein more than one of said organic photovoltaic devices are sensitive to light in a non-visible region of the electromagnetic spectrum.

64. (Previously presented) The device of claim 57 wherein all of said organic photovoltaic devices are sensitive to light in a non-visible region of the electromagnetic spectrum.

65. (Previously presented) The device of claim 57 wherein at least one of said organic photovoltaic devices is sensitive to light in the infrared region of the electromagnetic spectrum.

66. (Previously presented) The device of claim 57 wherein more than one of said organic photovoltaic devices are sensitive to light in the infrared region of the electromagnetic spectrum.

67. (Previously presented) The device of claim 57 wherein all of said photovoltaic devices are sensitive to light in the infrared region of the electromagnetic spectrum.

68. (Previously presented) The device of claim 57 wherein said organic light emitting devices comprise a group of light emitting devices emitting light of a color in the visible range of the electromagnetic spectrum and a further group of light emitting devices emitting light in a non-visible region of the electromagnetic spectrum.

69. (Previously presented) The device of claim 68 wherein said further group of light emitting devices emit light in the infrared region of the electromagnetic spectrum.

70. (Previously presented) The device of claim 57 wherein said matrix of independently addressable light emitting devices comprises a plurality of light emitting device addressing column electrodes and a plurality of light emitting device addressing row electrodes, said column electrodes intersecting said row electrodes, and said organic light emitting devices being positioned at the intersection of said column electrodes and said row electrodes.

71. (Previously presented) The device of claim 70 wherein said plurality of light sensing devices comprises a matrix of independently addressable light sensing devices.

72. (Previously presented) The device of claim 71 wherein said matrix of independently addressable light sensing devices comprises a plurality of light sensing device addressing column electrodes and a plurality of light sensing device addressing row electrodes, said column electrodes intersecting said row electrodes, and said light sensing devices being positioned at the intersection of said column electrodes and said row electrodes.

73. (Previously presented) The device of claim 72 further comprising a combined column driver and detector for addressing said light emitting device column

electrodes and said light sensing device column electrodes, said column driver and detector comprising circuitry for providing a forward bias to said light emitting devices to cause them to emit light and comprising circuitry for detecting light incident on said light sensing devices.

74. (Previously presented) The device of claim 72 comprising

a) a column driver for addressing said light emitting device column electrodes, said column driver comprising circuitry for providing a forward bias to said light emitting devices to cause them to emit light, and

b) a column detector for addressing said light sensing device column electrodes, said column detector comprising circuitry for detecting light incident on said light sensing devices.

75. (Previously presented) The device of claim 72 further comprising a combined row selector driver for addressing said light emitting device row electrodes and said light sensing device row electrodes.

76. (Previously presented) The device of claim 72 further comprising (a) a light emitting device row selector driver for addressing said light emitting devices row electrodes and (b) a light sensing device row selector driver for addressing said light sensing device row electrodes.

77. (Previously presented) The device of claim 73 wherein said combined column driver and detector or said column detector further comprises means for reverse biasing said light sensing devices.

78. (Previously presented) The device of claim 74 further comprising a clock signal generator for providing a scanning signal to the combined row selector driver or to said light emitting device row selector driver and said light sensing device row selector driver.

79. (Previously presented) The device of claim 78 wherein said clock signal generator provides scanning signals to the combined row selector driver or to said light emitting device row selector driver and said light sensing device row selector driver at a first higher frequency and a second lower frequency said first higher frequency scanning signal addressing said light emitting device row electrodes and said second lower frequency scanning signal addressing said light sensing device row electrodes.

80. (Previously presented) The device of claim 76 further comprising a first clock signal generator and a second clock signal generator, said first clock signal generator providing a scanning signal to said light emitting device row electrodes and said second clock signal generator providing a scanning signal to said light sensing device row electrodes.

81. (Previously presented) The device of claim 80 wherein said first clock signal generator provides a higher frequency scanning signal than said second clock signal generator.

Claims 82-86 (Canceled)

87. (Previously presented) The device of claim 57 further comprising a hole transporting layer between said high work function electrode and said organic light emitting material.

88. (Previously presented) The device of claim 87, wherein the hole transporting layer of both the light emitting devices and the light sensing devices is formed from the same layer.

89. (New) Method of preparing the device of claim 57 comprising the steps of:

- (a) providing a substrate,
- (b) providing a patterned layer of high work function material,
- (c) providing a patterned layer of organic light emitting material and a patterned layer of organic photovoltaic material, said organic photovoltaic material comprising at least an organic electron donor and at least an organic electron acceptor, and

- (d) providing a layer of low work function material,

wherein at least one of said steps of providing a patterned layer of organic light emitting material or a patterned layer of organic photovoltaic material over said layer of conductive material of high work function comprises applying said material using a method of selective printing.

90. (New) The method of claim 89 wherein said method of selective printing is selected from the group consisting of ink-jet printing, flexographic printing, gravure printing, and screen printing.

91. (New) The method of claim 90 wherein said method of selective printing comprises ink-jet printing.

92. (New) Method of preparing a combined information display and information input device according to claim 57 comprising the steps of:

- (a) providing a substrate,
- (b) providing a patterned layer of high work function material,
- (c) providing a first layer of insulating material over said layer of high work function material said first layer of insulating material being patterned to form a series of wells,

(d) providing a second layer of insulating material, said second layer of insulating material being patterned to form a series of parallel banks over said first layer of insulating material,

(e) optionally depositing by means of ink-jet printing a layer of hole transporting material into a selection of said wells,

(f) depositing by means of ink-jet printing a layer of an organic light emitting material into a first selection of said wells,

(g) depositing by means of ink-jet printing a layer of organic photovoltaic material comprising at least an organic electron donor and at least an organic electron acceptor into a second selection of said wells, and

(h) depositing a layer of low work function material over said layer of organic light emitting material and said layer of organic photovoltaic material, wherein steps (f) and (g) may be carried out in any order.

93. (New) Method of preparing a combined information display and information input device according to claim 57, comprising the steps of;

(a) providing a substrate,

(b) providing a patterned layer of high work function material,

(c) providing a first layer of insulating material over said layer of high work function material, said first layer of insulating material being patterned to form a series of wells,

(d) providing a second layer of insulating material, said second layer of insulating material being patterned to form a series of parallel banks over said first layer of insulating material,

(e) optionally depositing by means of ink-jet printing a layer of hole transporting material into a selection of said wells,

(f) depositing by means of ink-jet printing a third layer of insulating material in a first selection of said wells,

(g) depositing by means of ink-jet printing a layer of an organic light emitting material into a second selection of said wells,

(h) depositing by means of ink-jet printing a layer of organic photovoltaic material comprising at least an organic electron donor and at least an organic electron acceptor into a third selection of said wells, and

(i) depositing a layer of low work function material over said layer of organic light emitting material and said layer of organic photovoltaic material,

wherein steps (e), (f), (g) and (h) may be carried out in any order provided that when present the layer of hole transporting material is deposited prior to the deposition of the organic light emitting material or the organic photovoltaic material.